REMARKS

Claims 1-6 are pending in the present application. Claims 1 and 2 are herein amended. No new matter has been entered.

Applicants would like to thank Examiner Weinstein for discussing the application in an interview on May 26, 2009.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 4 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kajiwara '972** (US 5,369,972) in view of **Kajiwara '033** (US 5,256,033) as evidenced by **Kajiwara '403** (US 5,318,403); and claims 3 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kajiwara '972** in view of **Kajiwara '033** as evidenced by **Kajiwara '403**.

Favorable reconsideration is requested.

Claims 1 and 2 have been amended to recite "wherein said O-ring is a standard O-ring" as suggested by the Examiner in the interview. Support for the amendment is in the specification at, *e.g.*, pages 1-3. The Examiner also indicated that this amendment would be considered after final.

(1) Applicants respectfully submit that Kajiwara '972 in view of Kajiwawa '033 does not teach or suggest a multistage pump:

> wherein said relief plate, said stage side portion, said stage flat portion, and said inner surface of said cylindrical side portion of said adjacent intermediate casing form a space in which an O-ring is fitted, [and]
>
> wherein said O-ring is a standard O-ring

as recited in amended claims 1 and 2.

The Office Action takes the position that it would have been obvious to modify the structure of the cited conventional interstage casing (Fig. 6) in Kajiwara '972 such that it would be possible to fit an O-ring in a space between the casings. (Office Action, page 4.) Kajiwara '972 itself teaches modifying the structure of the conventional interstage casing to fit an O-ring. (Figs. 1-5.) However, this modified structure taught in Kajiwara does not include a space formed in part by a relief plate, a stage side portion, a stage flat portion and an inner surface of a cylindrical side portion of an adjacent intermediate casing as recited in the present claims. Kajiwara, '033 and '403 also do not include the space formed as recited in the present claims.

Kajiwara '972, '033 and '403 provide a solution for forming a space in which an O-ring is fitted, but this solution taught in these references does not include a space formed in part by a relief plate. The space for fitting an O-ring in Kajiwara '972, '033 and '403 is formed integrally from the bottom wall, the cylindrical portion and the cylindrical side wall, and by shaping the integral piece such that a space is formed for fitting an O-ring. (Col. 2, line 38 to col. 3, line 7; Figs. 1 and 2.) One of ordinary skill in the art would modify the cited conventional interstage casing of Kajiwara '972 as taught in Kajiwara '972, '033 and '403 in which a space is formed, without a relief plate, for fitting an O-ring.

Furthermore, the solution taught in the prior art does not provide a space for fitting a standard O-ring. In describing the prior art, the present specification states that in the conventional intermediate casing, variations in the shape of the recess make it difficult to form a

stable shape for fitting an O-ring. (Specification, pages 1-2.) This description in the specification refers to Fig. 7 in the present application and is comparable to Figs. 1 and 2 in Kajiwara '972, Fig. 1 in Kajiwara '033 and Figs. 1 and 2 in Kajiwara '403. A special O-ring is required in the cited prior art multistage pumps which increases the cost. (Specification, page 2.) By contrast, in the present invention as recited in the claims, the multistage pump can maintain a stable sealing capability and stable accuracy in an intermediate casing and can employ a standard O-ring. (Specification, page 2.)

(2) Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art to modify Kajiwara '972 based on the teachings of Kajiwara '033 and '403 to include an O-ring.

Kajiwara '972 discloses that the conventional sheet metal interstage casing (Fig. 6) cited by the Office Action is disadvantageous because "no installation space is available between the interstage casings for O-rings" and that the conventional interstage casing uses liquid gaskets which are not suitable for high pressure applications. (Col. 2, lines 14-22.) Kajiwara '972 refers to the space around surfaces 3b and 4b.

The space formed in part by side wall 7 and cylindrical wall 1 in Fig. 6 is too big for an O-ring to function properly. Since Kajiwara '972 states that "no installation space is available between the interstage casings for O-rings," Kajiwara '972 suggests that the space between side wall 7 and cylindrical wall 1 is not for an O-ring. In addition, the exposed angular edge of the periphery of the guide vane side wall 7 could damage an O-ring if placed in the space formed in part by side wall 7 and cylindrical wall 1 in Fig. 6 since guide vane side wall 7 is not held in

contact with the inner surface of the interstage casing 1. In Fig. 6, accurate positioning of the casings is provided by contact at surfaces 3b and 4b. If guide vane side wall 7 is held in contact with the inner surface of the interstage casing 1, then surfaces 3b and 4b are separated from each other resulting in inaccurate positioning. Side wall 7 is not attached to the inner surface of casing 1 by welding as alleged in the Office Action. The phrase "a guide vane side wall 7 ... is welded to the cylindrical receptacle-like structure of a next adjacent interstage casing" refers to a welding connection between guide vane side wall 7 and bottom wall 2.

For at least the foregoing reasons, claims 1-6 are patentable over the cited references. Accordingly, withdrawal of the rejection of claims 1-6 is hereby solicited.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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